

The geomagnetic effect ...

32141

8/534/61/000/021/005/005
D055/D114

of the head part of the comet must appear in a narrow belt across the longitude. Disturbances along the geomagnetic meridian of the Tunguska explosion to the north and south are possible; these would be connected with the lengthening of the dipole. Stations on the geomagnetic longitude of Irkutsk (Ulan-Bator, Toungu in lower India) must have registered perceptible disturbance and their records should be studied to find support for the views in this article. Reference is made to the theories of I.S. Astapovich (Ref. 3: Priroda, no.3, 1961). There are 5 Soviet references. (Abstracter's note: X
Essentially verbatim translation).

Card 5/5

OBASHEV, S.O.

Altitude distribution of solar prominences. Izv. Krym. astrofiz.
obser. 29:118-125 '63.
(MIRA 16:10)

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001237710005-5

OBASHEV, S.O.

Emission line profiles of surges. Izv. Krym. astrofiz. obser.
30:214-220 '63.
(MIRA 17:1)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001237710005-5"

OBASHEV, S.O.

Role of heavy ions and heat conduction in the cooling of
corona condensation. Izv. Akad. Kazakh. SSR. Ser. fiz.-mat.
nauk no. 3:91-110. Sem '64.
(MKA 17-12)

ACCESSION NR: APL02322

6/0031/64/000/006/0032/0038

AUTHOR: Obashev, S. O.

TITLE: The earth in an atmosphere of a quiet sun

SOURCE: AN KazSSR. Vestnik¹⁰, no. 6, 1964, 32-38

TOPIC TAGS: sun, atmosphere, radio wave

ABSTRACT: This paper is chiefly a survey of the types of studies being made during the International Year of the Quiet Sun. The author considers the subject in reference to the three stable envelopes of the sun (photosphere, chromosphere, and corona), particularly as they may affect the physical state of the earth's upper atmosphere. Granules, faculae, and sunspots (the principal phenomena of the photosphere) are being thoroughly studied, but the major field of study in regard to effect on the earth's upper atmosphere must be chromospheric flares, since phenomena associated with these are the principal factors modifying the atmosphere.

The energy of these flares may reach 10^{30} - 10^{33} ergs, and the volume may be on the order of 10^{27} cm³. They form at indeterminate moments in a group of sunspots. Observations are now being made at high mountain stations on the H_a line by means of

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ACCESSION NR: APl4042322

special narrow-band interference-polarizing filters, the half width of the transmission band of such filters being $5 \cdot 10^{-9}$ cm. Intense radiation in the ultraviolet and x-ray part of the spectrum, as well as corpuscular streams and concentrations of cosmic rays, accompany the appearance of flares. Radio communication, especially shortwave, is disturbed. The effect of the corona is less definitely known, partly because of difficulty in observing it. Special conditions are necessary, including weakening of photospheric light, exclusion of dust components in the atmosphere that scatter the light of the solar disk, and a special telescope with a minimum of scattering in the optical system. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00

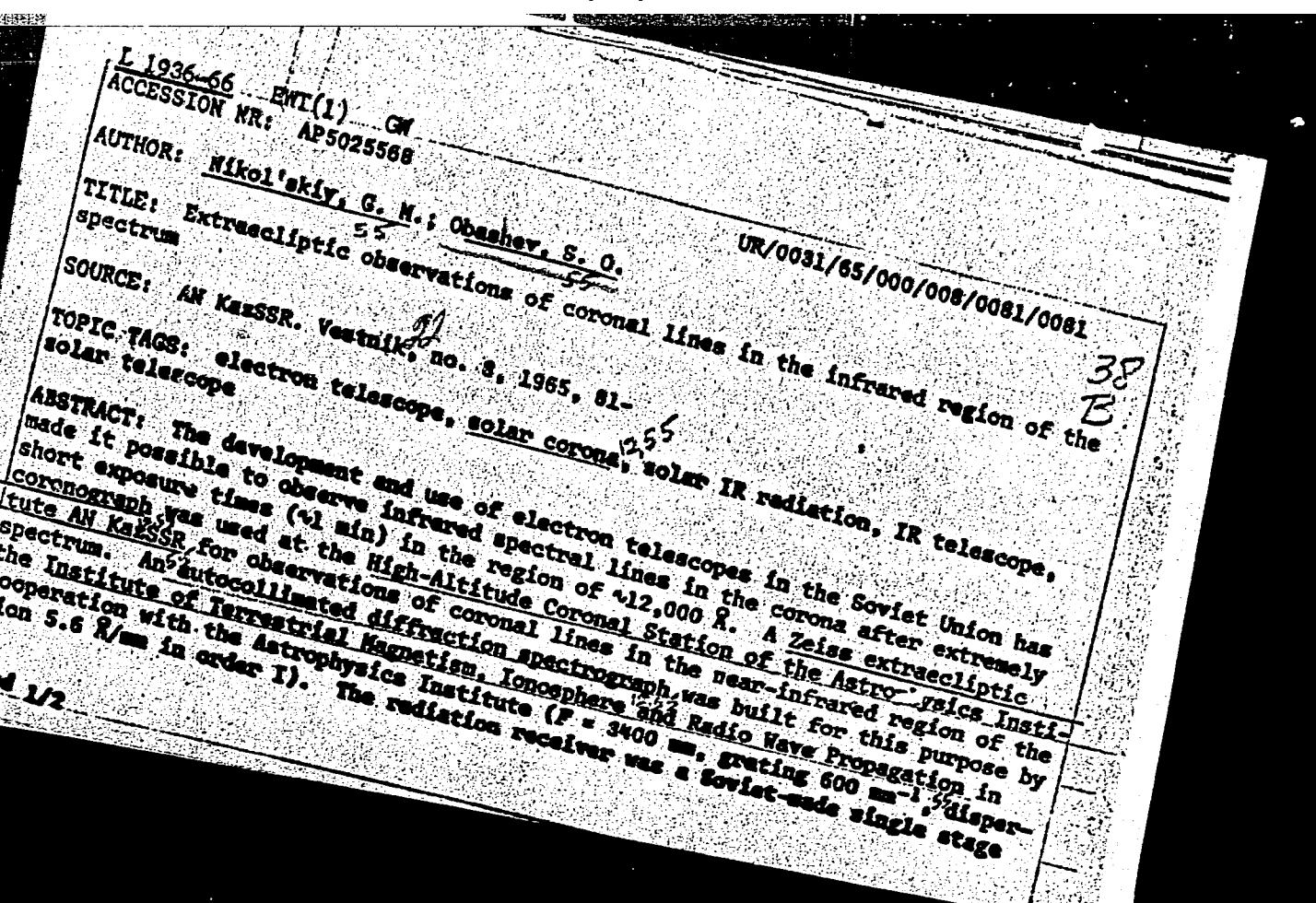
SUB CODE: AA, ES

NO REF SOV: 000

ENCL: 00

OTHER: 000

Card 2/2



L 1936-66
ACCESSION NR: AF5025585

electron optical converter with an oxygen-cesium photocathode cooled by dry ice. 85 mm/1.5 "Helios-40" lenses were used for the transfer optical system. A number of spectrograms in the Fe XI λ 7892 and Fe XIII λ 10747 regions were taken between 17 February and 10 March 1965. Examples of these spectrograms are shown in the article. In spite of the low chromosphere-photosphere activity and poor atmospheric conditions during this period, it was possible in many cases to record the λ 7892 line. Both these lines were observed during the complete absence of the Fe X λ 6374 line in the solar corona. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00

NO REF Sov: 000

ENCL: 00

OTHER: 000

SUB CODE: AA, OP

Card 2/2

L 1815-66 EXT(1) GW
ACCESSION NR: AF5025620

UR/0033/65/042/005/1017/1021
523.75

55
52
B

AUTHOR: Obashev, S. O.

TITLE: On the initial development phase of a chromospheric flare

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 5, 1965, 1017-1021

TOPIC TAGS: chromospheric flare, chromosphere, heterogeneous atmosphere,
exponential function, shock wave, hydrogen atom

ABSTRACT: The cause of chromospheric flares is unknown, but it may be hypothesized. The initial phase of a flare is like a burst in the chromosphere. Curves of the change of brightness in time show two branches: the increase and the decrease. In a short time the brightness increases from the initial state to the maximum. In many cases the increase of brightness and the change of area occur simultaneously in the initial phase. These circumstances make it possible to apply the theory of explosions in a heterogeneous atmosphere. The theory of a point-shaped explosion developed by Kompanejets is applied, and the density of the atmosphere is expressed by an exponential function. The solution of the Kompanejets equations yields a shock wave of a point-shaped explosion and its propagation. The development of

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ACCESSION NR: AP5025620

the flare is based on the parameters of the shock wave and arbitrarily chosen time, density, and energy values. The area of the flare is determined from the radius of the shock wave and its gradual expansion. The area increases in proportion to the propagation of the shock wave. The flare is located in the lower layers of the chromosphere where the density of the hydrogen atoms is equal to $10^{15}/\text{cm}^3$ and the temperature to 6000K. Dimensions of the flare area reach $(5 \text{ to } 10) \cdot 10^7 \text{ cm}$ at the end of the dilation. The energy of the flare reaches $3 \cdot 10^{25} \text{ erg}$ in 120 sec. The development of the flare area with time is not linear and may be expressed as a square root of the time. The area is greater than that of the front of the shock wave. Orig. art. has: 4 figures and 14 formulas. (EG)

ASSOCIATION: Astrofizicheskiy in-t Akademii nauk KazSSR (Astrophysical Institute, Academy of Sciences, KazSSR)

44,55

SUBMITTED: 09Sep64

ENCL: 00

SUB CODE: AA

NO REF Sov: 003

OTHER: 002

ATT PRESS: 4111

Card 2/2

L 63809-65

ACCESSION NR: AP5019423

UR/0020/65/163/003/0599/0602

15

AUTHOR: Obashev, S. O.

B

TITLE: Surge prominences in the solar atmosphere

SOURCE: AN SSSR. Doklady, v. 163, no. 3, 1965, 599-602

TOPIC TAGS: solar flare, solar prominence, solar surge, chromosphere, photosphere

ABSTRACT: The article discusses a characteristic surge prominence observed with an AFR-2 telescope at the Vysochkogornaya solnechnaya stantsiya Astrofizicheskogo instituta AN KazSSR (Alpine Solar Station, Astrophysics Institute, AN KazSSR) on 23 October 1957. Sequential photographs show both the flare and the associated limb prominence. The rate of ascent and descent of the prominence was constant:

$$v = (h_2 - h_1) / (t_2 - t_1) = \text{const.}$$

(respectively, 1.4×10^7 cm/sec and 1.2×10^7 cm/sec). The total number of hydrogen atoms N_H was calculated to be 1.5×10^{41} , and its mass $N_H m_H$ 2.4×10^{17} g. The kinetic energy of the prominence was 10^{31} erg. The configuration of the magnetic field of groups of sunspots probably determines the type of energy conversion which takes place, i.e., the formation of a flare or a surge prominence.

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L 63809-55

ACCESSION NR: AP5019423

It is shown that the matter constituting a prominence cannot be "supplied" from the surrounding region; hence, prominences are formations occurring in the photosphere or the lower chromosphere, which adjoins the photosphere. Orig. art. has 2 figures.

ASSOCIATION: Astrofizicheskiy institut Akademii nauk KazSSR (Astrophysics Institute, Academy of Sciences/KazSSR)

SUBMITTED: 31Dec64

ENCL: 00

SUB CODE: AA

NO REP Sov: 005

OTHER: 000

Card 2/2

SOV / 89-4-6-14/30

AUTHOR:

Obshurov, G.M.

TITLE:

Dosimetric Straightedge for Determining the Working Time in a Mixed Radiation Field (Dosemetricheskaya lineyka dlya opredeleniya vremeni raboty v smesennom pole izlucheniya)

PERIODICAL:

Atomnaya energiya, 1958, Vol. 4, Nr 6, pp. 585-586 (USSR)

ABSTRACT:

The dosimeter straightedge has 7 scales, the following values being entered:
Scale 1: The duration t (80 ± 0.48 m) } one scale
Scale 2: The value $t/t_0 = 0.125 N$ } one scale
Scale 3: The number N of the permitted radiation level } one scale
Scale 4: Values of the γ -field in $\mu\text{C/sec}$ which correspond to the permitted level } one scale
Scale 5: Values of the neutron current for fast neutrons in $n/cm^2 \text{ sec}$ } one scale
Scale 6: Values of the neutron current for slow neutrons in $n/cm^2 \text{ sec}$ } one scale
Scale 7: Values of the β -current in particles / $\text{cm}^2 \text{ sec}$ } one scale

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(In the case of a collision, everything also refers

Dosimetric Straightener for Determining the Working Time in a Mixed Radiation Field

SOV 89-4-6-4/30

to the permitted limit).

The following values were measured at one working place:
Fluence: 20 mC/sec., β particles: 100 particles/cm² sec; fast
neutrons: 100 n/cm² sec.

Contamination of the apparatus, i.e., moreover, double the permitted limit, whereas in the case of the working clothes only half of the permitted limit is reached. It must be ascertained how long operations may be allowed to work on this working place. For individual doses of contamination the following values are found for 1/2 by simply reading them off from the scales: 1.4; 0.17; 0.16; 0.15; 0.05; this amounts to a total of 2.24, which corresponds to 11 hours. There is 1 table, and 1 Soviet reference.

SUBMITTED: January 25, 1968

1. Radiation Dosage determination. 2. Radiation-Safety measures

Card 2/2

L 13917-65 ENG(j)/EWT(m) P-4 AMD/IFTC(b)
ACCESSION NR: AP4041410 8/0240/64/000/306/0059/0063

AUTHOR: Obsturov, G. M.

TITLE: Determination of total absorbed dose in external and internal
irradiation. 1. External irradiation. ^B

SOURCE: Gigiyena i sanitariya, no. 6, 1964, 59-63

TOPIC TAGS: radiation dosimetry, externally absorbed irradiation
dose, beta-irradiation dose, gamma-irradiation dose, neutron-
irradiation dose, absorbed dose determination method

ABSTRACT: The present report discusses methods of calculating
externally absorbed beta-, gamma-, and neutron-irradiation doses in
determining total irradiation doses for persons working with
ionizing radiation and radioactive substances. With beta-irradiation
the skin tissues are primarily affected, the organs are not exposed,
and with larger doses the fatty and muscular tissues and the
crystalline lens of the eye are affected. Gamma- and neutron-
irradiation affect the whole body including all critical organs
without any significant absorption by the tissue layers over the

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L 13917-65

ACCESSION NR: AP4041410

organs. The critical organs are affected mostly by internal irradiation and each organ has a different radiosensitivity. Absorbed gamma-irradiation doses at present are determined by individual photomonitoring, individual monitoring with small ion chambers, and individual luminescent monitoring. For gamma-irradiation doses ranging from 0.08 to 3 Mevs, an absorbed dose in rads is practically equivalent to the dose measured in roentgens. Various devices are used to measure the neutron flux of the entire energy spectrum which is expressed in bers/sec, but there are no individual dosimeters to measure integrated neutron flux. The latter is measured with thick emulsions and threshold detectors at present. A method for determining a neutron dose by making a cartogram of the neutron dose rates for the entire neutron energy spectrum is described. In the most sensitive organs, an absorbed neutron dose depends more on dose size than on neutron flux. Absorbed beta-irradiation is measured with a film holder containing two filters made of material corresponding to skin tissue and the crystalline lens of the eye. Examples are given for calculating externally absorbed beta-, gamma-, and neutron-irradiation doses. The methods described in the present study are only approximate and require considerable refinement by

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L 13917-65

ACCESSION NR: AP4041410

taking into consideration radiation depth of dose and cumulative doses for the critical organs and the whole body. "The author expresses deep gratitude to N. G. Gusev for valuable comments during the study." Orig. art. has: 1 table.

ASSOCIATION: None.

SUBMITTED: 12Mar63

ENCL: 00

SUB CODE: LS

NR REF Sov: 004

OTHER: 001

Card 3/3

Y 48122-65 ENG(j)/EMT(m)
ACCESSION NR: AP5011232

UR/0241/65/010/004/0042/0049

16

B

AUTHOR: Obaturov, G. M.

19

TITLE: Calculation of maximum permissible concentrations of β -radioactive gases in the air of work areas and in the atmosphere

SOURCE: Meditsinskaya radiobiologiya, v. 10, no. 4, 1965, 42-49

TOPIC TAGS: beta radiation, radioactive gases, radiation protection

ABSTRACT: The maximum permissible concentrations (MPC) of radioactive gases in air are calculated with reference to the following factors: (1) internal irradiation from the inhaled radioactive gas and from gas dissolved in human blood; (2) internal irradiation from the radioactive daughter products of the decay of the short-lived noble gases xenon and krypton; (3) space limitations at industrial installations; (4) radiobiological sensitivity of human organs; (5) absorption of β -particles in the dead layer of skin after it is irradiated; in skin during irradiation of muscular and fatty tissue, in the cornea and anterior chamber of the eye during irradiation of the crystalline lens. MPC_{lung} of gas isotopes calculated solely from internal irradiation conditions are 1-2 orders higher than the MPC calculated solely from external irradiation conditions. The MPC of isotopes for a limited

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L-48132-65

ACCESSION NR: AP5011232

space with due regard for all the above factors are much higher (by about 1 order) than for an infinite half-space without allowance for the above factors (e.g., 20 times higher for Ar⁴¹). The MPC of isotopes for various effective radii of the installations (2-15 m) differ insignificantly from one another, and this difference can be ignored. Protection from radioactive gases should be provided for the eyes and skin of those working in areas where the gases are present. Orig. art. has 2 tables.

ASSOCIATION: none

ENCL: 00

SUB CODE: LS

SUBMITTED: DO

OTHER: 00G

NO REF Sov: 000

Cl

Card 2/2

L 22900-66 EWT(m)

ACC NR: AP5025772

SOURCE CODE: UR/0240/65/000/010/0071/0078

35

AUTHOR: Obaturov, G. M.; Zabavin, A. K.

B

ORG: none

TITLE: Determination of summary dose absorption in internal
irradiation

SOURCE: Gigiyena i saniteriya, no. 10, 1965, 71-78

TOPIC TAGS: gamma radiation, radiation drug, ~~radiation agent~~,
isotope, radiation dosimetry, radiation biologic effect

ABSTRACT: In continuation of earlier work, the author presents three formulas for calculating the total dose absorbed by critical organs in internal irradiation, shows examples of the calculations, and compares their advantages and drawbacks. These methods are based on measuring concentrations of radioactive aerosols and the extent of their penetration, the activity of body eliminations, and the radioactivity of the human body. The first formula is based on 2 principles: the change in the amount of radioactive nuclei in the critical organ is equal to their penetration minus their elimination, proportional to N, and, the potency of the dose in the critical organ is proportional to its activity. The

UDC: 613.648:621.386.82

Card 1/2

L 22900-66

ACC NR: AP5025772

formula is further developed for isotopes with various half lives and results are tabulated for the various organs. Its disadvantages are that no account is taken of simultaneous irradiation of other parts of the body, concentrations of aerosols reaching the respiratory tract may vary, and the constants are not sufficiently accurate. The second formula is based on 24 hour elimination for the first day of irradiation. Calculations are correct for short-term irradiation but their accuracy is low for most long life isotopes and the constants have low accuracy. The third method is one in which the dose of internal irradiation is determined in a given case by the results of measuring radioactivity in the organism and by a formula expressing the internal radiation dose. It is accurate except for the coefficients but requires expensive equipment. Orig. art. has: 11 formulas and 4 tables.

SUB CODE: 06 / SUBM DATE: 07Apr64

Card 2/2 GLQ

OBATUROV, G.M.

Symposium on Individual Dosimetry in the Case of Accidental
External and Internal Overexposure. Atom. energ. 19 no.2;
209-211 Ag '65. (MIRA 18:9)

L 16469-66 EWT(m)/EWP(t) IJP(c) JD/DM
ACC NR: AP60C5533

SOURCE CODE: UR/0089/66/020/001/0054/0055

AUTHOR: Zeynalov, E. I.; Obaturov, G. M.; Shalin, V. A.; Chubarov, Yu. K.

ORG: none

TITLE: Using indium in neutron film badges

27 1965

SOURCE: Atomnaya energiya, v. 20, no. 1, 1966, 54-55

TOPIC TAGS: radiation dosimeter, neutron radiation, gamma radiation, indium

ABSTRACT: The authors describe the IFKNG film badge with an indium intensifier shield designed for thermal and intermediate neutrons and γ -radiation. A table is given comparing the theoretical and experimental values for the relative effect of thermal and intermediate neutrons on these badges. It is found that the IFKNG badge may be used with RM-5-4 x-ray film for simple and accurate measurement of thermal neutron doses from 0.005 rem, intermediate neutron doses from 0.03 rem and γ -radiation doses from 0.015 r in mixed fields of neutron and γ -radiation from nuclear reactors. Orig. art. has: 1 figure, 1 table, 1 formula.

SUB CODE: 18/ SUBM DATE: 10Sep65/ ORIG REF: 000/ OTH REF: 000

UDC: 539.107.37

Card 1/1/MC

41

B

Z

PA 61T19

GBBARIUS, V. I.

Power/Electricity
Electric Systems - Protection
Freezing

Feb 1948

"The Struggle Against Icing in Cooling Towers," V. I.
Gebarius, Engr, 1 p

"Elek Stants" No 2

Presents methods to control freezing of cooling towers in connection with drive to conserve fuel.
Freezing of cooling towers must be prevented for them to operate at maximum efficiency, even during winter months.

61T19

FEB

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001237710005-5

УБИАКИУС, В. И.
УБИАКИУС, В. И., инженер.

Simplified starting of propeller-type circulation pumps. Elek.sta.
27 no. 6:55-57 Je '56. (MIRA 9:9)
(Pumping machinery) (Condensers (Steam))

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001237710005-5"

AUTHORS: Geguzin, Ya. Ye. and Obcharenko, N. N. SOV/120-58-6-30/32

TITLE: Application of the Adsorption Pump in High-Temperature Metallographic Investigations (Ob ispol'zovanii adsorbtionnogo nasosa pri vysokotemperaturnykh metallograficheskikh issledovaniyakh)

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 6, pp 117-118
(USSR)

ABSTRACT: The authors employed an adsorption pump for the outgassing of the working chamber of a high-temperature metallographic microscope; the pump was developed and investigated in the Cryogenic Laboratory of the Physics Engineering Institute of the AS Ukrainian SSR. It is thought that the use of the pump in such investigations is very desirable, in view of its characteristics; thus the operating region is known to be free from oil and mercury vapours, since the outgassing is done without employing a liquid; consequently, the pumping velocity of the device increases with the increase of pressure in the outgassed space, which is important at high temperatures where various metal components can give off their occluded gases. A microscope fitted with an adsorption pump is shown

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SOV/120-58-6-30/32

Application of the Adsorption Pump in High-Temperature Metallographic Investigations

in Fig.1. In this, the working chamber 1 is in the form of a cylinder having a volume of 1 litre. The pump is welded to the bottom of the chamber, and is in the form of a tube 2 having a length of 300 mm, and a diameter of 30 mm. The tube contains a cylindrical grid having a diameter of 12 mm. The space between the grid and the tube is filled with grains of activated carbon. The instrument is first evacuated by means of a fore-vacuum pump. This pump is then switched off and the tube of the adsorption pump is placed in a Dewar vessel containing liquid nitrogen. In about five minutes, the pressure in the instrument is reduced to 5×10^{-6} mm Hg. The paper contains 1 figure and 2 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii KhGU
(Scientific Research Institute for Chemistry of the Kharkov State University)

SUBMITTED: December 21, 1957.

Card 2/2

OBCHARENKO, V.P.

AUTHOR: Abdeev, M.A., Andreev, V.M., Obcharenko, V.P. and Rodyakin,
V.V.
TITLE: Discussion of the book by Prof. V.I. Smirnov "Shaft Smelting
in the Metallurgy of Non-ferrous Metals", Metallurgizdat 1955.
(Obsuzhdenie knigi prof. V.I. Smirnova "Shakhtnaya Plavka
v metallurgii tsvetnykh metallov", Metallurgizdat, Sverdlovsk,
1955, 520 str.)
PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals) 1957, No.4,
pp. 82 - 84, (U.S.S.R.)

136-4-19/23

ABSTRACT: This is an outline of contributions at a discussion, held
at the end of November, 1956, on a recently published book by
Prof. Smirnov. The discussion was organised by the All-Union
Non-ferrous Metallurgical Research Institute (VNIITsvetmet) and
was attended by its staff as well as by representatives from
the mining industry and from the Altai Mining-metallurgical
Institute of the Academy of Sciences of the Kazakhstan SSR
(Altayskiy gorno-metallurgicheskiy Institut AN KazSSR).
L.P. Ushkov (of the research institute) thought the book
interesting but containing many defects. For example, the old
method of sintering in rotary furnaces is put forward as a new
process. Again, the methods of blowing in lead furnaces de-
scribed are not used at all at Russian works. The book is also
said to contain out-of-date diagrams.

Card 1/4

Discussion of the book by Prof. V.I. Smirnov "Shaft Smelting in the Metallurgy of Non-ferrous Metals", Metallurgizdat, 1955.(Cont) 136-4-19/23

I.I. Kershanskiy point out some defects in the book, e.g. the fact that although the author points out the importance of charge preparation, little material is presented on this subject. Nor did the author give comparative data on sinter-machine operation, and some information on sintering was misleading. This contributor, like the following one, was from the Research Institute. V.V. Rodyakin commended the author's inclusion of the "adsorption-al-autocatalytic" theory of oxide reduction as well as the other good features of the book. He indicated some defects, however, such as the absence of thermo-dynamical analysis and the altogether insufficient attention given to reduction processes in shaft lead smelting. This contributor also considered it unfortunate that the book does not mention the controversial subject of the behaviour of copper and zinc in the shaft smelting of lead-containing materials, although an article by Egunov, Tseyller, Loskutov et al had appeared in "Tsvetnye Metally" well before the publication of the book. M.V. Yakushin (of the Research Institute) complained of the out-of-date material used by the author in describing plant, as well as the presentation of misleading information on design. V.M. Andreev, of the Ust-Kamengorsk lead-zinc Combine (Ust-Kamenogorskiy Svintsovo-Tsink-

Card 2/4

Discussion of the book by Prof. V.I. Smirnov "Shaft Smelting in the Metallurgy of Non-ferrous Metals", Metallurgizdat, 1955.
(Cont.)

136-4-19/23

ovyy Kombinat) said that practice at his works contradicted Smirnov's statement that lead is only partly reduced and is lost in the form of the oxide. Other faults indicated were the incorrect treatment of high top temperature and the formation of scaffolds. V.P. Obcharenko (of the Research Institute) complained of the scanty attention given to combustion aspects of smelting, especially the use of oxygenated blast. N.N. Kubyshev of the Ust-Kamenogorsk Combine considered that Chapter 8 of the book contained mistakes and made recommendations contrary to works practice. M.A. Abdeev (the Altai Institute) suggested that revised editions of the book should contain information on the latest works practice and more information on the structure of mattes and slags in lead smelting. B.S. Khristoforov (The Research Institute) commends the author for including methods of analysis, but considers that the method of Oldwright and Miller might well be omitted from later editions as being misleading. The last contribution reported is by another member of the Research Institute staff, A.P. Sychev. He stated that although the book was on the whole of great interest, it contained many inaccuracies which should be corrected in later editions; nor

Card 3/4

Discussion of the book by Prof. V.I. Smirnov "Shaft Smelting in the Metallurgy of Non-ferrous Metals", Metallurgizdat, 1955.
(Cont.) 136-4-19/23

was sufficient attention given in the book to economical indices of shaft smelting. Summing up, the authors state that in spite of its defects the book will be useful to metallurgists dealing with shaft smelting.

AVAILABLE:

Card 4/4

OBCHAROV, Angel

Weaving of polyamide fibers, and its peculiarities. Tekstilna prom
ll no.2:12-15 '62.

OBCHAROVA, A.

Bol'shiaia tsel' (An important aim).
Moskva, Profizdat, 1953. 61 p. (Novatory sots. prom.)

SO: Monthly List of Russian Accessions, Vol. 7, No. 5, August 1954

DERANKOVA, Ye.B., kand.med.nauk; OBCHAROVA, E.S.

Course of labor in breech presentation; according to five- year
data of the Snegirev, Maternity Home 1946-1950 [with summary in English]
Akush. i gin. 34 no.5:37-41 S-0 '58 (MIRA 11:10)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. M.A. Petrov-
Maslakov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo
instituta i rodil'-nogo doma imeni Snegireva (glavnnyy vrach L.I.
Krotova).

(LABOR PRESENTATION,
breech, hosp., statist. (Rus))

OBCHINNIKOV, A. T.

Bee Culture

Feeding bees with milk Pchelovodstvo 29, no. 4, April 1952

9. Monthly List of Russian Accessions, Library of Congress, August ² ~~1953~~, Uncl.

OBCHINNIKOV, G.; NIKIFOROV, N.

In harmony with the Young Communist League. Voen.znan. 38
no.5:15 My '62. (MIRA 15:5)

1. Predsedatel' komiteta Dobrovol'nogo obshchestva sodeystviya
armii, aviatsii i flotu Leningradskogo zavoda poligraficheskikh
mashin (for Ovchinnikov). 2. Sekretar' komiteta Vsesoyuznogo
Leninskogo kommunisticheskogo soyuza molodezhi Leningradskogo
zavoda poligraficheskikh mashin (for Nikiforov).

(Young Communist League) (Military education)

OBCHINNIKOV, I. K.

PA 241T34

USSR/Geophysics - Earth's Crust

jan/req 23

"Disturbance of a Direct-Current Field by Conductors
Disposed in a Non-homogeneous Half-Space," I. K.
Obchinnikov, Sverdlovsk Mining Inst imeni Vakhrushev

"Iz Ak Nauk SSSR, Ser Geofiz" No 1, pp 48-60

Discusses electroconductivity of the upper layers of
the Earth's crust; derives general equation; deter-
mines potential of disturbance of a field by con-
ductors through a simple layer; and determines po-
tential for some cases in the formation of half-
spaces.

241T34

OBCHINNIKOV, T. T.

USSR/ Engineering - Bronze bushings

Card 1/1 Pub. 128 - 18/28

Authors : Lifshits, Ya. G., Cand. of Mech. Sc.; and Obchinnikov, T. T., Eng.

Title : The use of cast iron in place of bronze bushings in tractors

Periodical : Vest. mash. 35/6, page 72, Jun 1955

Abstract : The Institute for Construction of Agricultural Machinery, in cooperation with the "Rostsel'mash" Plant in Rostov, and a Motor and Tractor Station in Persianovsk, developed an anti-friction wrought iron used in STZ-KhTZ, NATI, DT-54, and ChTZS-60 tractors, as a substitute for bronze bushings. The bushings are made of perlite-ferrite composition, in which perlite constitutes 35-75%. Four USSR references.

Institution :

Submitted :

OBCHINNIKOV, V.M.

SUBJECT USSE / PHYSICS CARD 1 / 2 PA - 1513
AUTHOR NEMILOV, JU.A., OBCHINNIKOV, V.M., PISAREVSKIY, A.N., TETERIN, E.D.
TITLE The Application of the Device "FEU-12" in Scintillation
Spectroscopy.
PERIODICAL Atomnaja Energija, 1, fasc.4, 51-56 (1956)
Issued: 19.10. 1956

At first the demands made on photomultipliers such as are used in scintillation spectrometers are enumerated. The present work investigates the spectral qualities and some other characteristics of the photomultiplier "FEU-12" with louver-like diodes (diodes?) in consideration of these demands, as well as the application of this device in γ -spectroscopy. Some particular constructional features of "FEU-12": It has a semitransparent photocathode with a diameter of 50 mm. Behind the cathode is the focussing system. One of the electrodes may serve for the scattering or modulation of the electron flux. There follows a louver-like multiplication system consisting of two diodes which is completed by a reflector-like collector. The "FEU-12" is fitted with an antimony-cesium or a bismuth-silver photocathode. The diode system is punched from a special alloy. The most important statistical characteristics of the photomultiplier are the following: light characteristic, volt-ampere characteristic of in- and output, the spectral characteristic of the photocathode, the zonal characteristic of the photocathode. These characteristics are discussed individually. Application and selection of feeding: These photomultipliers were used in some varieties of scintillation-gamma spectrometers (single and in pairs). Here only

L 14152-66 EWT(m)
ACC NR: AP6001317

SOURCE CODE: UR/0248/65/000/009/0044/0052

AUTHOR: Voytkevich, A. A.; Tkachev, A. V.; Chekunov, A. S.; Obchinnikova, G. A.; Palyga, G. F.

ORG: Institute of Medical Radiology, AMN SSSR, Obninsk (Institut meditsinskoy radiologii AMN SSSR)

TITLE: Reaction of the neurosecretory nuclei of the hypothalamus, thyroid, and adrenal glands to radiation injury of the organism

SOURCE: AMN SSSR. Vestnik, no. 9, 1965, 44-52

TOPIC TAGS: ionizing radiation, pathogenesis, endocrinology, polonium, radiation sickness, radicisotope

ABSTRACT: Study of the neurosecretory nuclei in rats exposed to polonium 210 revealed a three-stage development of changes in the neurons of the paraventricular and supraoptic nuclei. Immediately after exposure the neurosecretion flowed rapidly along the axons, after which elimination and synthesis were in a state of relative balance. Finally, inhibition of neurosecretion set in, ending in partial destruction.

UDC: 617-001.28-07 : [616.831.4+616.441+616.45]-008.6-076.916

Card 1/2

L 14152-66
ACC NR: AP6001317

tion of the neurons. The adrenals were studied on the same material at different periods of acute radiation sickness. Within 24 hours of exposure the glands increased in weight almost 1½ times. This increase as well as the histological changes were indicative of marked hypertrophy of the glands due to intensified production of hormones. The structural and functional changes observed in the thyroid were more or less similar to those in the adrenals. Under normal conditions the peripheral endocrine glands are elements in a "closed" system--hypothalamus-hypophysis-thyroid--adrenal-hormone--metabolism in peripheral tissue. Introduction of Po^{210} disrupts hormone metabolism, which gives rise to compensatory intensification of the thyrotropic and adrenocorticotrophic functions of the hypophysis, resulting in hyperstimulation of the thyroid and adrenals. The isotope accumulates selectively in the neurosecretory nuclei of the hypothalamus and ultimately destroys them. Orig. art. has: 2 figures, 1 table.

SUB CODE: 06/ SUBM DATE: 05Jun65/ ORIG REF: 012/ OTH REF: 000

Card 2/2 *do*

OEDRZALEK, J.

Development of the processing of metals in Czechoslovakia. p. 550.

Col. 5, no. 12, Dec. 1955
ZA SOCIALISTICKOU VDU A TECHNIKU
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5 No. 4 April 1956

OBDRZALEK, J.

Extrusion of hollow shapes. Tr. from the Czech. p. 107

MECHANIK. (Stowarzyszenie Inżynierów i Techników Mechaników Polskich)
Warszawa, Poland. Vol. 32, no. 3, March 1959

Monthly list of East European Accessions Index, (EEAI), LC, Vol. 8, no. 6,
June 1959
uncl.

Z/032/60/010/07/013/030

EQ73/E335

AUTHORS: Obdržálek, J., Engineer and Baboř, K.

TITLE: Use of Welded Rings for Components to be Manufactured
by Cold Extrusion

PERIODICAL: Strojírenství, 1960. Vol 10, Nr 7, pp 522 - 526

ABSTRACT: The authors describe the advantages of using welded rings instead of seamless steel pipes or solid discs used in the manufacture of components by cold extrusion. They deal with the material to be used, the heat treatment and the structure of the material after heat treatment (see ✓ the microphotos, Figures 7-18, p 524). Figure 19 shows photographs of various components produced by extrusion from welded semis. Considerable savings in material and costs are claimed and it is stated that components manufactured by this method are at least as good as those produced by machining. There are 19 figures and 4 Czech references.

ASSOCIATION: Šmeralovy zavody Brno (Šmeral Works, Brno)

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Z/031/61/009/004/004/008
A121/A126

AUTHOR: Obdržálek, J., Engineer

TITLE: Manufacture of parts by means of cold pressing from welded rings

PERIODICAL: Strojírenská výroba, no. 4, 1961, 182 - 183, 187

TEKT: In the Šmeralovy závody (Šmeral Plants), in the Výzkumný ústav tvářecích strojů a technologie tváření (Research Institute of Molding Machines and Molding Technology) in Brno the mass production of several characteristic parts made of welded rings has been taken up. The manufacturing process consists in the use of ring-shaped semi-finished products of dimensions equal or similar to the final part. During the past years the cold pressing of blocks was introduced. The application of the new pressing practice was made possible by the mechanical crank press LU, developed by the Ždárské strojirny (Machine Plants of Ždár) and the Šmeral Plants, based on the plans prepared by the Research Institute of Molding Machines and Molding Technology. By using pierced blocks, the share of waste material through drilling the hole is rather significant; when using tubes and applying slicing operations this share is lower but still consi-

Card 1/3

Manufacture of parts by means

Z/031/61/009/004/004/008
A121/A126

derable. These disadvantages can be avoided by using welded rings manufactured on automatic welding machines for link chains. Low-carbon steels used in these fusion weldings are for example the types ČSN 11354, 11374, 12010, 11523. For cold pressing they are more advantageous than the ČSN 11370 steels used up to now. A combined annealing should be performed to obtain a refined ferritic-perlitic structure, and after cooling down to a temperature below 400°C the second annealing is done. The recrystallization lasts for 4 - 6 hours and it should eliminate the inner stress after annealing. Thus, the rings are transformed into a condition suitable for the pressing process. The rings are bonded and their surface treated with a lubricant; the following cold pressing lasts 24 hours. Vertical crank presses for plungers of 63 - 1,000 tons are used in the ČSR. The LJ 250 press is supplied with eight various operating strokes of the plunger, i.e., with an effect of the full pressure to a distance of 5.1 - 27 mm, with four values of the plunger stroke of 160 - 315 mm, and with four various quantities of stroke between 23 - 33 mm. The high number of strokes may be utilized only by an automatic pressing tool. Such a tool (Figure 3) for a vertical crank press for welded rings consists of the vibration feeding funnel (1), the shoot (2), the shift register (3), the double-armed feeder (4) and the proper shaving die

Card 2/3

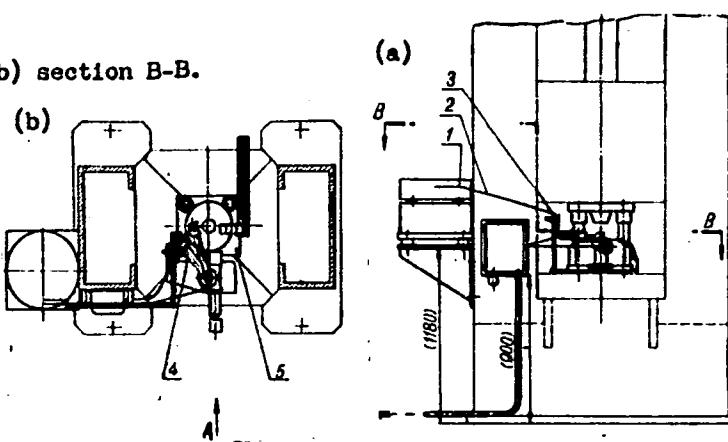
Z/031/61/009/004/004/008
A121/A126

Manufacture of parts by means

(5). The introduction of the described technology would help to save 1.7 million Kčs of production costs and about 1,300 tons of material per year. There are 5 figures and 1 table.

ASSOCIATION: Šmeralovy závody, n. p., Brno (Šmeral Plants, People's Enterprise, Brno)

Figure 3: (a) View "A", (b) section B-B.



Card 3/3

OBDRZALEK, Miloslav, inz.

Fluorite raw materials deposits in Czechoslovakia. Rudy 12
no.11:410-412 N '64.

1. Central Geological Office, Prague.

AUTHORS: Obdržálek, O. and Parma, Václav CZECH/34-59-7-12/22

TITLE: Discussion on the Article of V. Parma: "Problems of Regulation of the Combustion Process in Open-hearth Furnaces" (Diskuse k článku V. Parmy: Problematika regulace spalování u Martinových pecí)

PERIODICAL: Hutnické Listy, 1959, Nr 7, pp 612-613 (Czechoslovakia)

ABSTRACT: The major part of the article of V. Parma (Hutnické Listy, 1958, Nr 11, pp 979 to 983) relates to limiting the drawbacks in maintaining an optimum excess of combustion air in the open-hearth furnace. The writer of these comments believes that the problem is not as simple as is conveyed by the article and reports on experience gained in the Třinec Iron Works where automatic regulation of the thermal process was in operation between 1955 and 1957 on six 130 ton and three 200 ton furnaces, using for the purpose Soviet built automatic instruments. The writer of the comments summarises the considerations which should govern further perfection of the regulation of the combustion process in Czechoslovakia. These considerations formed the basis of an automatic regulation

Card 1/2

CZECH/34-59-7-12/22

Discussion on the Article of V. Parma: "Problems of Regulation
of the Combustion Process in Open-hearth Furnaces"

built for one open-hearth furnace in the Třinec Iron
Works, which is the first Czech built automatic
regulation for an open-hearth furnace. Soviet apparatus
still in use is to be substituted by Czech built apparatus.

By O. Obdržálek

Author's reply

The author starts his reply with the argument that he
only dealt with the problems of regulation of the
combustion process in open-hearth furnaces with
"inter-connected" regulation but he did not deal with
problems relating to complex automation.

By V. Parma



Card 2/2

OBORZALEK, O. SIMILOWSKI, E.

"Automatic heat control in stack furnaces in Trinec Ironwork of the Great October Socialist Revolution."

HUTNIK. Praha, Czechoslovakia. Vol. 9, no. 4, Apr. 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclassified

OEDRZAŁEK, Oldrich, inż.

Problems of agglomeration process automation. Hut liaty
18 no.11: 762-769 N°63.

1. Trinecke záležarny Velké ríjnové socialistické revoluce,
Trinec.

I 44761-65 EWP(b)/EWP(t) JD
ACCESSION NR: AP5015038

CZ/0357/64/000/C10/0481/0483

2 3

AUTHOR: Obdrzalek, Oldrich(Engineer)

B

TITLE: 130-Ton open hearth furnace regulated by the ZPA low-pressure pneumatic system

SOURCE: Hutnik, no. 10, 1964, 481-483

TOPIC TAGS: metallurgic furnace, automatic control system, automatic pneumatic control

Abstract: Described is an automatic system designed at the ZPA [Zavody prumyslove automatizace; Industrial Automation Plants], in Nusle. Technical data are given on the regulation of the combustion process, regulation of pressure, oil-temperature regulation, switching of regenerators, design of the pneumatic components, logic circuits, and recording instruments. Also discussed are the maintenance, fuel saving, service life of the furnace, and output. Orig. art. has 1 figure.

ASSOCIATION: Trinecke zelezarny VRSR, Trinec (Trinec Iron Works, VRSR)

Card 1/2

Submitted Aug 64

OBEDIAR, A.

"Smoking." (p.747). PRIRODA A SPOLOCNOST. (Spolochnost pre sirenie politickych a vedeckych poznatkov na Slovensku) Martin. Vol. 2, No. 12, 1953.

SO: East European Accessions List, Vol 3, No 8, Aug 1954.

OBEDIYENTOVA, G.V.

OBEDIYENTOVA, G. V.

35906. Terrasy Choremshana I Fiziko-Geograficheskie Usloujya Vre Meni Ikh
Formirovaniya. Tudy In-ta Geografii (Akad. Nauk SSSR), VYP. 43, 1949,
s. 78-103.

Letopis' Zhurnal'nykh Statey, No. 49, 1949.

OBEDIMENTIVA, G.

Russia - Public Works

"From Zhiguli to Kama." Vokrug sveta no. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952, Uncl.

2

OBEDEVENTOVA, G.V.

✓ 6.9-382

551.582.1(17)

*Ol'shentova, G. V., *Proiskhozhdenie Zibigul'skoi Vozzyschennosti i razvitiye ee rel'efa*. [The origin of Zibigul Plateau and the development of its relief]. I. Akademii Nauk SSSR, Institut Geografii, Trudy, v. 53, Materialy po Geomorfologii i Paleogeografi SSSR, Moscow 1953. 246 p., 74 figs., bibliog., p. 213-216. Price: 15 rub. DLC—Information on the characteristics of the plateau's climate are given on p. 14-17. Temperature, temperature range, amount and distribution of precipitation, thickness of the snow cover (depending on the exposure of the slopes and the character of vegetation), humidity, direction and strength of winds, etc. are discussed. General features of the climate are: hot and dry summer; severe, snowy winter; large daily and yearly temperature variations; rapid shift from winter frost to summer heat. *Subject Headings:* 1. Climate data. 2. Plateau climates. 3. Climate of Zibigul Plateau. 4. Zibigul Plateau, U.S.S.R.—A.M.P.

MESHCHERYAKOV, Yu.A.; OBEDIYKTOVA, G.V.; SHUKEVICH, M.M.

Some geomorphological features of regions of disjunctive dislocation
in the lower Volga Valley. Trudy Inst. geog. no.58:49-69 '53.
(Volga Valley--Faults (Geology)) (MIRA 8:4)

OBEDIYENTOVA, G.V.

Recent tectonic movements and the geomorphology of the left bank of
the Volga Valley in the vicinity of the Zhiguli Hills. Trudy Inst.
geog. no.58:70-89 '53.
(MIRA 8:4)
(Volga Valley--Physical geography)(Volga Valley--Earth
movements)

OBEDIENTOVA, G.V.; GERASIMOV, I.P., chlen-korrespondent, otvetstvennyy redaktor.

[Materials on the geomorphology and paleogeography of the U.S.S.R.] Materialy po geomorfologii i paleogeografii SSSR. No.8 [Origin of the Zhiguli Mountains and the formation of their relief] Proiskhozhdenie Zhigulevskoi vysyshennosti i rassvitie ee rel'efa. Moskva, Izd-vo Akademii nauk SSSR, 1953. 246 p.
(MLRA 6:8)

1. Akademiya nauk SSSR.
(Zhiguli Mountains--Geology, Structural) (Geology, Structural--Zhiguli Mountains)

OBEDIYENTOVA, G.V., kandidat geograficheskikh nauk.

In the Trans-Volga region. Nauka i zhizn' 20 no.6:24-26 Je '53. (MLRA 6:6)
(Volga Valley--Description and travel)

~~REPRINT FROM TAVR~~
~~MEYSHADT, M. I.; OBEDIENTOVA, G.V.~~

"Data on paleogeography." No.1. V.P.Grichuk, K.K.Markov, etc.
Reviewed by M.I.Meyshadt, G.V.Obedientova. Izv.AN SSSR. Ser.
geog. no.3:78-83 My-Je 55. (MLBA 8:9)
(Paleogeography)

Geographical Survey
GEYDEMAN, T.S.; KAMANIM, L.G.; KANIVETS, I.I.; OBEDIETTOVA, G.V.

Natural features of the Kodry Hills. Trudy Inst.geog. no.64:69-104
'55. (MLRA 8:11)

(Kodry Hills--Physical geography)

OBEDIYETTOVA, G.V.

Relief of central Moldavia. Trudy Inst.geog. no.65:5-38 '55.
(Moldavia--Physical geography) (MLRA 8:11)

OBEDIYENTOVA, G.V.

Pre-Akchaghylian Volga River bed. Izv. AN SSSR. Ser. geog. no.6:95-
100 N-D '56. (MIRA 10:1)

1. Institut geografii Akademii nauk SSSR.
(Volga Valley--Paleogeography)

OBEDIYENTOVA, G.V.; FEDOROVICH, B.A., doktor geogr.nauk, otvetstvennyy red.
MESHCHERYAKOV, Yu.A., kand.geogr.nauk, otvetstvennyy red.
VOLINSKAYA, V.S., red.izd-va.; PLESITSKAYA, S.M., tekhn.red.

[Neotectonic movements and geomorphological conditions in the central
Volga Valley] Noveishie tektonicheskie dvizheniya i geomorfologiche-
skie usloviia Srednego Povolzh'ia. Moskva, Izd-vo Akad. nauk SSSR,
1957. 96 p. (Akademika nauk SSSR. Institut geografii, Trudy, no.17)
(MIRA 11:3)

(Volga Valley--Geology, Structural)

OBEDIYENTOVA, G.V., kandidat geograficheskikh nauk.

~~Geotectonics and rivers of different size. Natura 46 no.3:87-~~
90 Mr '57.
~~(MLRA 10:3)~~

1. Institut geografii Akademii nauk SSSR (Moskva)
(Geology, Structural)
(Rivers)

AUTHOR:

Obediyentova, G.V.

SOV-10-58-4-6/28

TITLE:

The Problem of the Formation of Platform Structures During
the Quaternary Period (K voprosu o formirovanií platformen-
nykh struktur v chetvertichnoye vremya)

PERIODICAL:

Izvestiya Akademii nauk SSSR - Seriya geograficheskaya,
1958, Nr 4, pp 57-59 (USSR)

ABSTRACT:

Using the eastern part of the Zhiguli dislocation and the
Berlin dislocation as examples, the author gives a detailed
explanation of the formation of platform structures during
the Quaternary Period. In this connection, the names of
the following scientists are mentioned who conducted re-
search in this subject, such as D.A. Kozlovskiy, Yu.A. Mesh-
cheryakov, and G.V. Obediyentova. It can be concluded
that the formation of platform structures of older geologic
periods was not only continued during the Quaternary Period
(eastern part of the Berlin and Zhiguli dislocations), but
that also new structures having their own tectonic system
were developed, which are linked with the adjacent zones
(western parts of the same dislocations).

Card 1/2

SOV-10-58-4-6/28

The Problem of the Formation of Platform Structures During the Quaternary Period

There is 1 map, 1 diagram and 5 Soviet references.

ASSOCIATION: Institut geografii AN SSSR (Geographical Institute, AS
USSR)

1. Geology--USSR 2. Geological time--Determination

Card 2/2

OBDIYENTOVA, G.V.

Erosion cycles in the lower Volga River basin. Izv.AN SSSR.
Ser.geog. no.3:95-99 My-Je '60. (MIRA 13:6)

1. Institut geografii AN SSSR.
(Volga Valley--Erosion)

OBEDIYENTOVA, G.V.

Role of glacial sedimentations in the formation of the alluvium
in glacial and periglacial zones. Izv. AN SSSR. Ser. geog
no.1:83-89 Ja-F '62. (MIRA 15:2)

1. Institut geografii AN SSSR.
(Volga Valley--Alluvium)
(Volga Valley--Drift)

OBEDIYENTOVA, G.V.

Time and causes of the Khvalynian transgression of the Caspian Sea.
(MIRA 17:3)
Izv. AN SSSR. Ser. geog. no.1:74-80 Ja-F '64.

1. Institut geografii AN SSSR.

OBEDIYENTOVA, G.V.

Role of erosion cycles in the formation of planation stages of the
Volga Valley relief. Izv. AN SSSR. Ser. geog. no.5:71-79 S-0 '65.
(MIRA 18:10)

1. Institut geografii AN SSSR.

OBEDIYENTOVA, G.V.

Boundaries and nature of glaciation in the eastern and central
part of the East European Plain. Biul. Kom. chetv. per. no.30:
(MIRA 19:2)
111-127 '65.

ACCESSION NR: AT4001255

S/2668/63/000/013/0055/0065

AUTHORS: Drukarev, G. F.; Ob"edkov, V. D.

TITLE: The role of polarization effects in inelastic collisions of electrons with atoms

SOURCE: AN LatSSR. Institut fiziki. Trudy*, no. 13, 1963, 55-65

TOPIC TAGS: inelastic collision, nuclear collision, electron inelastic collision, polarization effect, polarized orbit method, polarized orbit, electron density distortion, atomic polarization

ABSTRACT: Equations are formulated for inelastic collisions with account of virtual transitions. The system of equations given by N. F. Mott and H. S. W. Massey (Theory of Atomic Collisions, Oxford, 1933, Chapter 8, Sec. 5) is a particular case of the equation derived here. To obtain the explicit form of the polarization potentials in the adiabatic approximation it is proposed to use a corresponding variational principle, and a simple computation formula, obtained with variation of one parameter, is presented by way of an example. The dependence of the excitation cross section when the energy near

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ACCESSION NR: AT4001255

threshold is then investigated. The results show that the polarization of the atom exerts an appreciable influence on the scattering amplitude and excitation amplitude at low energies of the incoming and elastically-scattered particles, respectively. It is shown that when the particle energy approaches the threshold of a new channel the polarization potential should be non-additive in this region. This imposes a limit on the applicability of the results for elastic scattering, and the strong-coupling approximation should be used near threshold. Orig. art. has: 42 formulas.

ASSOCIATION: Leningradskiy gosudarstvennyy ordena Lenina Universitet im. A. A. Zhdanova (Leningrad State "Order of Lenin" University)

SUBMITTED: 00

DATE ACQ: 10Dec63

ENCL: 00

SUB CODE: PH, NS

NO REF SOV: 003

OTHER: 007

Card 2/2

OBEDNIN, N.

Agricultural Machinery

Mechanized grain cleaner. Kolkh. proiz., 12,
No. 6, 1952

9. Monthly List of Russian Accessions, Library of Congress, October 1953, 2 Uncl.

OBEDNIN, N.

Furnace heating in livestock buildings. Sel'stroy.11 no.5:
18-19 My '56.
(MIRA 9:9)

1.Secretar' Achinskogo Rayonnogo komiteta Kommunisticheskoy partii
Soyetskogo Soyuza Krasnoyarskogo kraya.
(Farm buildings--Heating and ventilation)

ОБЩЕСТВЕНСКИЙ, Е. Д.

РОЗДЕСТВЕНСКИЙ, Е. Д., И ОБЕЛЧЕНКО, А. Н.

Influence of Water-Soluble Salts Upon the Process of Compression of Loess-Type Grounds

Tr. In-ta sooruzheniy AN UzSSR, no. 5, 1954, pp 19-33

The authors expound the results of laboratory investigations into the action of salt solutions and salts in solid form upon the process of compression of loess-type grounds with broken structure (heavy dustlike sandy loam and light dustlike loam (sand and clay). Experiments were conducted with ground pastes prepared by addition to the grounds of various salts (NaCl , Na_2CO_3 , Na_2CO_3 , Na_2SO_4 , CaSO_4 , MgSO_4) in solid form or their solutions at various concentrations. (RZhGeol, No 3, 1955)

SO: Sum. No. 639, 2 Sep 55

ROZHDESTVENSKIY, Ye.D. Prinimali uchastiye: GORBUNOV, B.P., kand. tekhn. nauk; SHUL'GINA, V.P., kand. tekhn. nauk; OBELOCHENKO, A.N., kand. tekhn. nauk; KUDRIYA, S.A., kand. khim. nauk; KURBANOV, B.P., otd. red.; BAKLITSKAYA, A.V. red.; BARTSEVA, V.B., tekhn. red.

[Physical properties of the loess soils of Uzbekistan] Fiziko-tehnicheskie svoistva lessovykh gruntov Uzbekistana. Tashkent, Izd-vo Akad. nauk Uzbekskoi SSR, 1960. 269 p. (MIRA 14:9) (Uzbekistan—Loess)

OBELENKO, P. F.

3

The refraction of some inorganic complex compounds.
A. Sh. Shamsiev and P. F. Obel'chenko. Trudy Svid. (1)

nestial. Gosudarst. Univ. (Tashkent) 33, No. 4, 57-63
(1952).—Mol. refractions are for K₃PtCl₆ 46.70, K₃PtBr₆
58.43, K₃PtI₆ 78.51, K₃Pt(CNS)₆ 74.81, K₃Pt(C₂O₄)₆ 48.66,
K₃PdCl₆ 38.03, K₃PdBr₆ 47.85. Individual bond refractions
detd. from these values increase in the order Cl, Br, CNS, I,
C₂O₄.
H. M. Lester

① ✓

OBOLETENKO, P. I.
USSR.

Solubility of some slightly soluble silver salts in electrolyte solutions of the systems: $\text{Ag}_2\text{O}-\text{Na}_2\text{HPO}_4-\text{H}_2\text{O}$ and $\text{Ag}_2\text{PO}_4-\text{K}_2\text{HPO}_4-\text{H}_2\text{O}$ at 25°. Sh. T. Tolmuk and P. F. Oboletenko. Doklady Akad. Nauk UzSSR. S.S.R. 1953.

Referat. Zhur. Khim. 1954, № 17845. — The solv. of Ag_2PO_4 was studied in solns. of Na_2HPO_4 and K_2HPO_4 in concns. of 10^{-3}M to satn. The solid phase corresponded to pure Ag_2PO_4 . The solv. of Ag_2PO_4 did not change on increasing the concn. of the added salt to 10^{-2}M but increased at higher concns. The solv. product of Ag_2PO_4 increased from 1.81×10^{-5} to 1.91×10^{-4} in 0.890M Na_2HPO_4 and to 1.17×10^{-6} in 4.5M K_2HPO_4 . At the same time the activity product practically did not change. The activity coeff. was calcd. with the aid of the 2nd approximation of the Debye-Hückel equation.

CONFIDENTIAL P.F.

USSR

Solubility of some slightly soluble silver salts in electrolyte solutions. Systems: $\text{Ag}_3\text{PO}_4\text{-Na}_2\text{SO}_4\text{-H}_2\text{O}$ and $\text{Ag}_3\text{PO}_4\text{-K}_2\text{SO}_4\text{-H}_2\text{O}$ at 25° . Sh. T. Talipov and P. I. Obel'chenko. Doklady Akad. Nauk Uzbek. S.S.R. 1953, No. 7, 29-31; Referat. Zhur., Khim. 1954, No. 19593.— The solv. of Ag_3PO_4 was detd. in Na and K sulfate solns. in concns. of 10^{-1}M to satn. at 25° (cf. *Ibid. (Dokl.)* 1952, Nos. 1, 3, and 6). As the concn. of sulfate increased, the solv. of Ag_3PO_4 rose (4 times in satd. Na_2SO_4 and 6 times in satd. K_2SO_4). The solv. products of Ag_3PO_4 in Na_2SO_4 and K_2SO_4 were calcd.; they were const. only at small concns. (up to 0.01 mol. per l.) of Na and K sulfates. The activity coeff. calcd. by the Debye-Hückel equation (2nd approximation) was const.; this permits calcd. the solv. value of its solv. in their satd. solns. — M. Hogen.

OBEL'CHENKO, P.F.

Constant α in the second approximation of the Debye-Hückel formula.
Trudy SAGU no. 55:97-101 '54.
(Solubility) (Silver salts) (MLRA 9:12)

OBEL'CHENKO, P.F.

Activity coefficients for slightly soluble silver salts in electrolyte
solutions. Trudy SAGU no.55:103-110 '54.
(Solubility) (Silver salts) (MLRA 9:12)

OBEL'CHENKO, P.F.

Calculation of the solubility of slightly soluble salts. Trudy SAGU
no.55:111-123 '54. (MLRA 9:12)
(Solubility) (Silver salts)

The physicochemical analysis of the systems: difficultly soluble silver salt-electrolyte-water Sh. T. Tripov and P. F. Ovsyannikova *Zhurn. Struk. Sistemat. Khim.*

Voprosy Khim. Nauk, No. 7, 3-23 (1951).

The solv. of Ag_2SO_4 (I) in $\text{Ag}_2\text{SO}_4\text{-NaNO}_3\text{-H}_2\text{O}$ (II) and $\text{Ag}_2\text{SO}_4\text{-NaNO}_3\text{-H}_2\text{O}$ (III) and $\text{Ag}_2\text{SO}_4\text{-NaNO}_3\text{-H}_2\text{O}$ (IV) in $\text{Ag}_2\text{SO}_4\text{-KClO}_4\text{-H}_2\text{O}$ (V) and $\text{Ag}_2\text{SO}_4\text{-KClO}_4\text{-H}_2\text{O}$ (VI) and $\text{Ag}_2\text{SO}_4\text{-NaNO}_3\text{-H}_2\text{O}$ (VII) and $\text{K}_2\text{SO}_4\text{-H}_2\text{O}$ (VIII) and $\text{Ag}_2\text{SO}_4\text{-NaNO}_3\text{-H}_2\text{O}$ (IX) and $\text{K}_2\text{SO}_4\text{-H}_2\text{O}$ was investigated at 25° and a concn. range from 10 mol/l. to the satr. of the solns., with the exception of the last system, where the max. salt concn. was 4.5 mol/l. The Ag content in the satd. solns. was detd. by potentiometric titration with KI solution and a Ag-indicating electrode and the ppts. were detd. gravimetrically. The solns. of I, II and III could be calcd. by the thermodynamic formula for the activity product: $L_{\text{Ag}} = L_{\text{Ag}}^{\infty} \cdot \mu^{Z_1 Z_2}$, where L_{Ag} is the soln. product and μ is the activity coeff. and Debye-Hückel equation for the detn. of the activity coeff. $-\log \mu = 0.5(Z_1^2 + Z_2^2)/1000$, where Z_1 and Z_2 are the ionic charges of the ions. The activity of the potassium salt in the solns. was detd. by the method indicated from a quinon. titration of a ferri-ferrocyanide soln.

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The solubility product of difficultly soluble silver salts in solutions of electrolytes. By I. V. Lopatin and N. A. Chenchko. Trudy Srednevolzhskogo Nauchno-Issledovatel'skogo Instituta Khimii Nauk, 37, No. 1, p. 107, 1954.

Abstract.—By use of the common formulas for the determination of solubility products of sparingly soluble salts, it is shown that the solubility product of silver salts in aqueous electrolyte solutions depends on the concentration of the electrolyte.

Introduction

In the review for systems having a common ion and those without Na^+ , it was shown that an increase of L_p with increase in electrolyte concn. was observed. The rate of increase in L_p depended on the type of electrolyte. There was no change in L_p of Ag_2CrO_4 acetate, bromate, and sulfate for electrolyte concn. below 10^{-4} mol/l., and below 10^{-4} mol/l. in the case of Ag_2PO_4 . When comparing the increases in L_p caused by nitrates, acetates, sulfates, and Na and K biphosphates, the effect of cation radius was found; i.e., $L_{\text{P},\text{Ag}_2\text{CrO}_4}$ increased proportionally to the ionic radii or as the hydrophilic nature of ions diminished. For practical purposes, it was concluded that the solv. products of difficultly sol. Ag salts at various concns. of electrolytes remained const. up to a concn. of 1 mol/l. It was observed that the magnitude of L_p of salts depended on the valency and ionic radius of the electrolyte.

Activity product of difficultly soluble silver salts in solutions of electrolytes. Sh. T. Telipov and P. E. Ober-

Trudy Vsesoyuznogo Instituta Fiziko-Khimicheskogo Analiza, Akademiya Nauk SSSR, No. 7, 87-93 (1954), cf. preceding page.

The way of difficultly solv. Ag salts in solns of electrolytes of various concns could be calc'd. by means of Debye-Hückel's formulas if the activity product in the following form: $- \log \gamma = L_0 + L_1 \mu$, for all univalent salts $L_0 < L_1$, for all divalent salts $L_0 > L_1$ and for multivalent salts $L_0 < L_1$. In these computations γ the activity of cell, and μ the ionic product, must be known for various concns of the electrolyte. The theoretical formulas of Debye-Hückel in their various degrees of approximation were used for calcn of γ . To verify the constancy of $L_0 + L_1 \mu$ (activity product) the applicability of the 1st and 2nd approximations of the Debye-Hückel formula in solns of various electrolytes, at temps 18-31° and concns. 0.01-0.1M, was tested. In each system (Ag salt electrolyte-H₂O) γ was calc'd. from the 2 formulas: $- \log \gamma = 0.505 \frac{z_1 z_2}{\mu}$ formula of the 1st approximation; $- \log \gamma = 0.505 z_1 z_2 \sqrt{\mu} / (1 + \sqrt{\mu})$, a simplified form of the 2nd approximation with assumed av. ionic radius $a = 3.04$; and $- \log \gamma = 0.505 z_1 z_2 \sqrt{\mu} (1 + 0.43 z_1 z_2)$, where γ was calc'd. from the soln of Ag salt in water and the soln of electrolyte at same concn. The salt "Nigrit" Na₂Ag₂ was investigated at 18 and 31°. Here L_0 was not a const. particularly with higher electrolyte concn., when greater value of a was used in the calcn. It was generally concluded that the 2nd approximation of the Debye-Hückel formula was applicable for the dev. of γ and that the concept of const. L_0 for all concns of electrolyte in the Ag salt-electrolyte-H₂O systems was valid. In the original article, tables with values of a were given for all systems and values of $L_{0,1,2,3}$ at various temps. and concns. of electrolyte.

Paul Palivenco

OBEL'CHENKO, P.F.

The constant a from the second approximation for the Debye-Hückel formula¹ is calculated. *Trudy Sred. Medzhd. Univ. i Nauk. Akad. SSSR, No. 35, No. 7, 97-101 (1954).* — The dependence of the apparent ionic radius of sparingly sol. salts on the nature and concn. of added electrolytes was studied. A general formula was derived for evaluation of a : $a = [C/(\log L_p - \log L_d)] - (3.03/\sqrt{\mu})$, where $C = 3.09, 0.181$, and 18.33 for uni-uni-, uni-bi-, and uni-trivalent salts, resp., and μ = ionic strength. The quantity L_d was obtained from exist. values of the activity product L_p and values of the mean ionic activity coeff. γ from the 1st approximation of the Debye-Hückel equation. Values of a calcd. from previously reported solv. measurements with aq. AgOAc , Ag_2SO_4 , and Ag_3PO_4 and AgIBrO_3 (Taranov, et al., *C.A.* 44, 3338c) in presence of added electrolyte were inversely proportional to $\sqrt{\mu}$ and r , the ionic radius of the added electrolyte. L_p values measured in presence of highest μ were selected for calcs.

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Activity coefficients of different soluble silver salts in
solutions of electrolytes. P. I. Tsel'chenko. Trudy
Nauki 55, No. 7 (1951), p. 103-105. L. preceding abstr.—
Similar values of activity coeffs. were observed for di-
finitely sol. Ag salts with identical anions and without
common ions. In such systems the solv. of Ag_xA salt in
soln. of another salt of known concn., could be calc'd. by
the following formula: $\gamma_x = [L_a/\mu]^{1/(x+1)}$ (1), where
 L_a , the activity product, was detd. from the solv. of Ag_xA
in pure water by means of the Debye-Hückel formula in the
first approximation, and μ was found from the curve for the
av. values of μ . Formula 1 could be used to calc. the solv.
of definitely sol. Ag salt if γ was detd. by the 2nd approxi-
mation of the Debye-Hückel formula: $\log \gamma = 0.506 \times \sqrt{\mu}$
 $(1 + 0.93 \sqrt{\mu})$, where μ was detd. by measuring the total
elec. cond. of the soln. In this study, γ was detd. for the
following systems, at 25°, for various electrolyte concns.
contg. common ions and without them: (1) AgOAc in
solns. of AgNO_3 , NaOAc , KCl , LiOAc , and $\text{Cu}(\text{OAc})_2$,
(2) AgBrO_3 in solns. of KNO_3 , $\text{Ce}(\text{NO}_3)_4$, Na_2SO_4 , K_2SO_4 ,
 MgSO_4 , CaSO_4 , AgNO_3 , KBrO_3 , and KClO_3 ; (3) AgSCN in
solns. of NaNO_3 , KNO_3 , NaCl , $\text{Mg(NO}_3)_2$, H_2SO_4 , Na_2SO_4 ,
 K_2SO_4 , MgSCN , and AgNO_3 ; (4) AgIPO_4 in solns. of NaNO_3 ,
 KNO_3 , NaOAc , Na_2SO_4 , K_2SO_4 , Na_2HPO_4 , and
 K_2HPO_4 . The 2nd approximation of the Debye-Hückel
formula was used to calc. γ in all these systems. From the
correlations of γ with the log. of concn. for each soln., it was
evident that in all cases, the value of γ decreased with in-
creasing concn. Inspection of the curves indicated that
there was no group of electrolytes that could provide close
enough values of γ for a Ag salt, to justify the use of av
values of γ for a wide range of electrolyte concns. in the
calc. of solv. Only the nitrates of alk. earth metals
possessed a common γ for AgNO_3 at concn. below 0.1 mol/l.

Paul Parry

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Obel'Charko, P.T.

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The calculation of solubility of differently soluble salts
P. F. Obel'Charko, Trudy Sredneasiat. Gidrograf. Upr.
1954, No. 1, 131-23 (1954).

From the general formula of $\text{Ag}_n\text{A}^{(n+1)-}$ dissociated according to the equation $\text{Ag}_n\text{A}^{(n+1)-} \rightleftharpoons n\text{Ag}^{+} + \text{A}^{(n+1)-}$, the thermodynamic formula for the activity product $La = L_p \gamma^{n+1}$ (where L_p is ionic product and γ the activity coeff.), the electrolyte without common ions dissociated, according to $K_p B_0 \rightleftharpoons p\text{Ag}^{+} + q\text{B}^{(q-1)-}$, and the Debye-Hückel formula $\log \gamma = -0.53a\sqrt{n}/(1 + 0.33a\sqrt{n})$ (where a is the valency of the Ag salt anion, a a const. connected with the radius of ions, n the ionic force of the sol.), expressed as $\alpha = X + Y$, where $X = [(a + n)/2] C_1$ and $Y = [(pq^1 + qp^1)/2] C_2$, where C_1 and C_2 are the concns. of the Ag salt and the electrolyte, resp.) a series of equations was derived for La of $\text{Ag}_n\text{A}^{(n+1)-}$. $\log \frac{La}{n!} = \log \alpha + (n+1) \log C_1 - [0.505a(n+1)(X+Y)/n]$
 $[1 + 0.53a(X+Y)/n]$ (1) was for the system without the common ion. For systems with a common cation or anion the equations took on addnl. terms. By rearranging equation 1 $\log C_1$ could be calcd. for all systems. In cases where the electrolyte concn. was greater than the concn. of Ag salt, the equations were simplified: $\log C_1 = \{[\log La]/(n+1)\} - \{(\alpha \log a)/(n+1)\} + [0.605aY^2/(1 + 0.33aY/n)]$ (2). The solubilities of the salts listed in the previous article (cf. preceding abstr.), were calcd. by means of the modified equation 1. The results, presented graphically, show a correlation between C_1 and $\log C_1$. The deviation of exptl. points from the calcd. curves did not exceed the exptl. error. The solv. of a difficultly sol. Ag salt in soln. of electrolyte at any concn. can be calcd. by the above equations, provided its sol. in pure water and in a salt solution of the electrolyte is known for the value of La and a .

*P. F. Obel'Charko**AM 10*

KHADEYEV, V.A.; OBEL'CHENKO, P.F.

Possibility of using a tantalum microelectrode in amperometry.
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